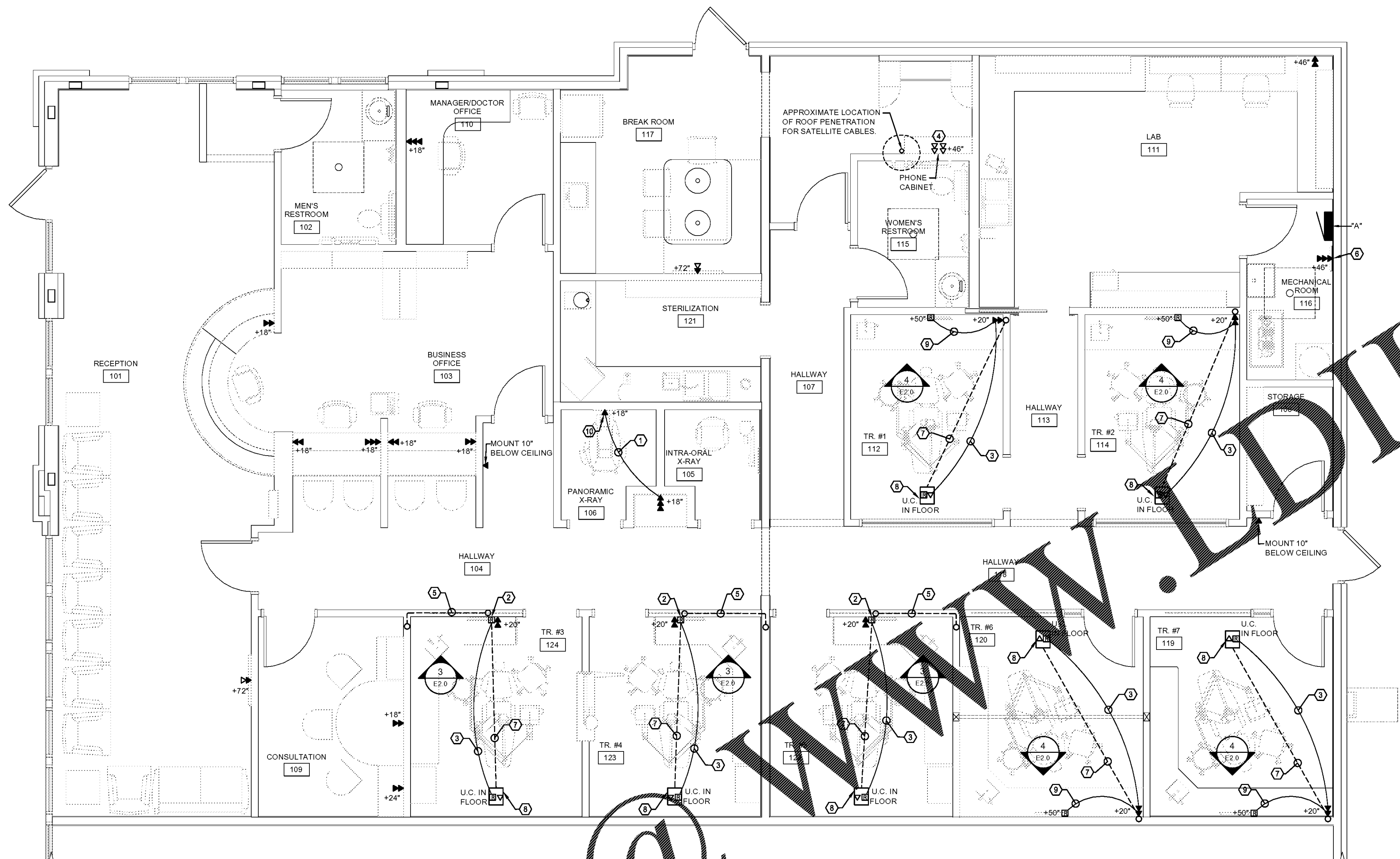

FLOOR PLAN - LOW VOLTAGE

SCALE: 1/4" = 1'-0"

LOW VOLTAGE PLAN NOTES:

- ALL DATA CABLE SHALL BE CAT5E.
- VERIFY ALL EXPOSED CONDUIT ROUTING WITH ARCHITECT/ENGINEER WHERE CONDUIT IS EXPOSED IN FINISHED ROOMS.
- ALL COAXIAL CABLE TO BE RG6 (QUAD SHIELDED).
- ALL DATA CABLES AND COAXIAL CABLES ARE TO BE HOME RUN TO PHONE CABINET LOCATED IN THE (BREAK ROOM) UNLESS OTHERWISE NOTED.
- ALL CABLES SHALL BE CLEARLY LABELED AT BOTH ENDS.
- ALL RACEWAYS (CONDUITS, PULL STRINGS, WOOD CHASES) ARE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR OR MILLWORK CONTRACTOR.
- ALL DATA AND COAXIAL CABLES SHALL HAVE MINIMUM 10' SERVICE COIL ABOVE CEILING, 2' MINIMUM COILED IN UTILITY BOX, AND 20' COILED AT PHONE CABINET.
- ONELINE DIAGRAMS AND RISER DIAGRAMS ARE DIAGRAMMATIC REPRESENTATION TO AID THE CONTRACTOR IN UNDERSTANDING THE FUNCTION AND OPERATION OF THE SYSTEMS. E.C. SHALL REVIEW THE ONELINES, RISERS AND FLOOR PLANS FOR THE EXACT QUANTITIES AND LOCATION OF ALL EQUIPMENT. E.C. SHALL FURNISH AND INSTALL ALL EQUIPMENT SHOWN ON ANY OR ALL OF THESE DIAGRAMS AND DRAWINGS. DETAILED WIRING DIAGRAMS SHOWING ACTUAL WIRING FOR THE SYSTEMS FURNISHED SHALL BE A PART OF THE SHOP DRAWING SUBMITTAL.
- DEVICE LOCATIONS MAY BE DISTORTED FOR CLARITY. LOCATED DEVICES SYMMETRICALLY WITH THE ARCHITECTURAL ELEMENTS.
- CONTRACTOR SHALL COORDINATE WITH THE OTHER TRADES TO VERIFY SPACES ARE CLEAR OF OBSTRUCTIONS. MAINTAIN MAXIMUM HEADROOM AND SPACE CONDITION AT ALL POINTS IN THE BUILDING. WHERE HEADROOM OR SPACE CONDITIONS APPEAR INADEQUATE, NOTIFY ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE INSTALLATION.
- FURNISH OTHER TRADES ADVANCE INFORMATION ON LOCATIONS AND SIZES OF PIPING, DUCTWORK, EQUIPMENT, FRAMES, BOXES, SLEEVE AND OPENINGS NEEDED FOR WORK. FURNISH INFORMATION AND SHOP DRAWINGS TO PERMIT TRADES AFFECTED TO INSTALL THEIR WORK PROPERLY AND WITHOUT DELAY.
- SEE HVAC AND PLUMBING PLANS FOR LOCATIONS OF HEATING, VENTILATING, AIR CONDITIONING AND PLUMBING EQUIPMENT. DO NOT REFERENCE ELECTRICAL DRAWINGS FOR EXACT LOCATION.
- SCHEDULE REQUIRED POWER, TELEPHONE, OR DATA OUTAGES IN OCCUPIED AREAS OF THE BUILDING WITH THE OWNER. CONTRACTOR SHALL WORK UNTIL SERVICE IS RESTORED. OUTAGE WORK SHALL BE DONE AFTER OR BEFORE NORMAL WORKING HOURS, ON WEEKENDS OR HOLIDAYS.

(X) LOW VOLTAGE PLAN KEYED NOTES:

1. ONE (1) DATA CABLE BETWEEN PANORAMIC X-RAY UNIT TO JUNCTION BOX IN DIGITAL ALCOVE IN ADDITION TO TWO (2) DATA CABLES TO TELEPHONE CABINET.
2. PROVIDE ONE (1) 6FT RAPID RUN CABLE FROM COMPUTER TO MONITOR.
3. ONE (1) RAPID RUN CABLE BETWEEN UTILITY CENTER AND COMPUTER WORK STATION. INSTALL UNDERGROUND IN 2" CONDUIT. CONDUIT FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. SEE DETAIL #4/ SHEET E2.0.
4. FOUR (4) COAX CABLES BETWEEN PHONE CABINET AND SATELLITE DISH. ALL ROOF PENETRATIONS ARE BY GENERAL CONTRACTOR. SATELLITE DISH FURNISHED AND INSTALLED BY ASPEN DENTAL MANAGEMENT INC.
5. PROVIDE 1" CONDUIT IN WALL TO ACCESSIBLE CEILING. SEE DETAIL #3/ SHEET E2.0.
6. THREE (3) DATA CABLES FROM MECHANICAL ROOM DEMARK TO TELEPHONE CABINET. INSTALL ABOVE CEILING.
7. CONDUIT CHASE PROVIDED BY ELECTRICAL CONTRACTOR. SEE ELECTRICAL PLANS FOR MORE INFORMATION.
8. ROUTE ONE (1) COAX CABLE ABOVE CEILING FROM PHONE CABINET TO LOW VOLTAGE JUNCTION UNDER COUNTER AND THEN RUN THROUGH 2" CONDUIT UNDERGROUND TO UTILITY CENTER.
9. ONE (1) 10FT RAPID RUN CABLE BETWEEN COMPUTER WORK STATION AND WALL MOUNT VIEW SCREEN. CONDUIT FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
10. ROUTE DATA THROUGH SAME JUNCTION BOX AS SHOWN ON E1.1P. SEE KEYED NOTE 18 ON E1.1P.

DIVISION 27 COMMUNICATIONS

27 05 00. TELECOMMUNICATION PREMISE WIRING

A. INSTALLER QUALIFICATIONS: AN EXPERIENCED INSTALLER WHO IS A REGISTERED COMMUNICATION DISTRIBUTION DESIGNER CERTIFIED BY THE BUILDING INDUSTRY CONSULTING SERVICE INTERNATIONAL.
B. QUALITY CONTROL:
   1. COMPLY WITH NFPA 70.
   2. ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED AS DEFINED IN NFPA 70, ARTICLE 100, BY A TESTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION, AND MARKED FOR INTENDED USE.
   3. SYSTEM REQUIREMENTS: COORDINATE THE FEATURES OF MATERIALS AND EQUIPMENT SO THEY FORM AN INTEGRATED SYSTEM. MATCH COMPONENTS AND INTERCONNECTIONS FOR OPTIMUM FUTURE PERFORMANCE.
   4. CONTRACTOR SHALL TEST EACH CABLE TO INSURE THAT THE INSTALLATION MEETS EIA/TIA STANDARDS. THREE COPIES OF THIS REPORT SHALL BE PROVIDED TO THE OWNER AS PART OF RECORD DRAWINGS.
C. ABBREVIATIONS:
   1. EIA - ELECTRONIC INDUSTRIAL ALLIANCE
   2. IDC - INTERNATIONAL DATA CORPORATION
   3. IDF - INTERMEDIATE DISTRIBUTION FRAME (CLOSET)
   4. MDF - MAIN DISTRIBUTION FRAME (CLOSET)
   5. PVC - POLYVINYL CHLORIDE
   6. STP - SHIELDED TWISTED PAIR (CABLE)
   7. TIA - TELECOMMUNICATION INDUSTRY ASSOCIATION
   8. UTP - UNSHIELDED TWISTED PAIR (CABLE)
D. RACEWAYS AND BOXES: FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
E. BRANCH CABLES:
   1. TWISTED-PAIR CABLES, CONNECTORS, AND TERMINAL EQUIPMENT: LISTED AS COMPLYING WITH CATEGORIES 5E OF EIA/TIA-568-A.
      a) CONDUCTORS: SOLID COPPER.
      b) UTP CABLE: COMPLYING WITH EIA/TIA-568-A. FOUR THERMOPLASTIC-INSULATED, INDIVIDUALLY TWISTED PAIRS OF CONDUCTORS; NO. 24 AWG, COLOR-CODED; ENCLOSED IN PVC JACKET.
      c) UTP PLENUM CABLE: LISTED FOR USE IN AIR-HANDLING SPACES. FEATURES ARE AS SPECIFIED ABOVE, EXCEPT MATERIALS ARE MODIFIED AS REQUIRED FOR LISTING.
      d) CABLE LABELS: SELF-ADHESIVE VINYL OR VINYL-CLOTH WRAPAROUND TAPE MARKERS, MACHINE PRINTED WITH ALPHANUMERIC CABLE DESIGNATIONS.
H. WIRING METHOD:
   1. INSTALL WIRING IN RACEWAY AND CABLE TRAY EXCEPT WITHIN CONSOLES, CABINETS, DESKS, AND COUNTERS EXCEPT IN ACCESSIBLE CEILING SPACES AND IN GYPSUM BOARD PARTITIONS WHERE CABLE WIRING METHOD MAY BE USED.
   2. USE UL-LISTED PLENUM CABLE FOR ALL LOCATIONS.
   3. CONCEAL RACEWAY AND WIRING EXCEPT IN UNFINISHED SPACES.
   4. USE TECHNIQUES, PRACTICES, AND METHODS THAT ARE CONSISTENT WITH EIA/TIA-568 RATING OF COMPONENTS AND THAT ENSURE CATEGORY PERFORMANCE LEVEL FOR THE COMPLETED AND LINKED SIGNAL PATHS, END TO END.
   5. DO NOT DAMAGE CONDUCTORS, SHIELD, OR JACKET.
   6. DO NOT BEND CABLE IN HANDLING OR IN INSTALLING TO SMALLER RADII THAN MINIMUMS RECOMMENDED BY MANUFACTURER.
   7. PULL CABLES WITHOUT EXCEEDING CABLE MANUFACTURER'S RECOMMENDED PULLING TENSIONS.
   8. SECURE AND SUPPORT CABLE AT INTERVALS NOT EXCEEDING 30 INCHES (760 MM) AND NOT MORE THAN 6 INCHES (150 MM) FROM CABINETS, BOXES, FITTINGS, OUTLETS, RACKS, FRAMES, AND TERMINALS.
   9. SEPARATION OF WIRES: COMPLY WITH EIA/TIA-569 RULES FOR SEPARATING UNSHIELDED COPPER COMMUNICATION AND DATA-PROCESSING EQUIPMENT CABLES FROM POTENTIAL EMI SOURCES, INCLUDING ELECTRICAL POWER LINES AND EQUIPMENT.
   10. MAKE SPLICES, TAPS, AND TERMINATIONS ONLY AT INDICATED OUTLETS, TERMINALS, AND CROSS-CONNECT AND PATCH PANELS.
   11. USE SPLICE AND TAP CONNECTORS COMPATIBLE WITH MEDIA TYPES.
I. SYSTEM LABELING:
   1. USE A UNIQUE, THREE-SYLLABLE ALPHANUMERIC DESIGNATION FOR EACH CABLE, AND LABEL CABLE AND JACKS, CONNECTORS, AND TERMINALS TO WHICH IT CONNECTS WITH THE SAME DESIGNATION. USE LOGICAL AND SYSTEMATIC DESIGNATIONS FOR FACILITY'S ARCHITECTURAL ARRANGEMENT.
      a) FIRST SYLLABLE IDENTIFIES AND LOCATES WIRING CLOSET OR EQUIPMENT ROOM WHERE CABLE ORIGINATES.
      b) SECOND SYLLABLE IDENTIFIES AND LOCATES CROSS-CONNECT OR PATCH-PANEL FIELD IN WHICH CABLE TERMINATES.
      c) THIRD SYLLABLE DESIGNATES TYPE OF MEDIA (COPPER OR FIBER) AND POSITION OCCUPIED BY CABLE PAIRS OR FIBERS IN THE FIELD.
   2. WORKSTATION: LABEL CABLES WITHIN OUTLET BOXES.
   3. DISTRIBUTION CABINETS: LABEL EACH UNIT AND FIELD WITHIN THAT UNIT.
   4. WITHIN CONNECTOR FIELDS, IN WIRING CLOSETS AND EQUIPMENT ROOMS: LABEL EACH CONNECTOR AND EACH DISCRETE UNIT OF CABLE-TERMINATING AND CONNECTING HARDWARE
   5. CABLES, GENERAL: LABEL EACH CABLE WITHIN 4 INCHES (100 MM) OF EACH TERMINATION AND TAP, WHERE IT IS ACCESSIBLE IN A CABINET OR JUNCTION OR OUTLET BOX, AND ELSEWHERE AS INDICATED.
   6. EXPOSED CABLES AND CABLES IN CABLE TRAYS AND WIRE TROUGHS: LABEL EACH CABLE AT INTERVALS NOT EXCEEDING 15 FEET (4.5 M).
   7. CABLE SCHEDULE: POST IN PROMINENT LOCATION IN EACH MDF AND IDF. LIST INCOMING AND OUTGOING CABLES AND THEIR DESIGNATIONS, ORIGINS, AND DESTINATIONS. PROTECT WITH CLEAR PLASTIC COVER. PROVIDE ELECTRONIC COPY OF FINAL COMPREHENSIVE SCHEDULES FOR PROJECT, IN SOFTWARE AND FORMAT SELECTED BY OWNER OR OWNER'S IT STAFF.

LEGEND

NOTE: ALL SYMBOLS SHOWN MAY NOT APPEAR ON DRAWINGS.

SYM.	IDENTIFICATION
	COMMUNICATION
▶	DATA OUTLET PROVIDE DEDICATED CAT5E HOME RUN FROM TELEPHONE CABINET FOR EACH SYMBOL SHOWN UNLESS OTHERWISE NOTED.
⊳	COAX OUTLET PROVIDE DEDICATED QUAD SHIELDED RG6 COAX HOME RUN FROM TELEPHONE CABINET FOR EACH SYMBOL SHOWN.
R	RAPID RUN CABLE INSTALL RAPID RUN CABLE FOR EACH SYMBOL SHOWN.
U.C.	UTILITY CENTER FURNISHED BY G.C.

RESPONSIBILITY MATRIX (LV)

ITEM	DESCRIPTION	FURNISHED BY	PRODUCT INFO	SUPPLIER INFO	REMARKS
CONDUITS/CHASES/BOXES	PER PLAN	EC	-	-	
DATA CABLES (PROVIDED AND INSTALLED)	CAT5E	EC	-	-	
DATA CABLES TERMINATIONS, JACKS AND FACEPLATES	CAT5E	LV	-	-	
COAX CABLES (PROVIDED AND INSTALLED)	RG6 (QUAD SHIELDED)	EC	-	-	
COAX CABLES TERMINATIONS, JACKS AND FACEPLATES	RG6 (QUAD SHIELDED)	LV	-	-	
RAPID RUN CABLES	CABLE ASSEMBLY	GC/EC	6' LENGTH - 60000 10' LENGTH - 60001 15' LENGTH - 60002 25' LENGTH - 60003 35' LENGTH - 60004 50' LENGTH - 60005	cablestogo.com	
RAPID RUN CABLE TERMINATION	(BOTH ENDS)	GC/EC	COUPLER MALE/MALE - 42058		
ROOF PENETRATION	PER PLAN	GC	-	-	

FURNISHED BY:
LV = LOW VOLTAGE CONTRACTOR
EC = ELECTRICAL CONTRACTOR
ADMI = ASPEN DENTAL MANAGEMENT INC
GC = GENERAL CONTRACTOR

COORDINATE LOCATION OF ALL EXPOSED CONDUIT WITH OWNER PRIOR TO INSTALLATION.

EXCEL
ARCHITECTS • ENGINEERS • SURVEYORS
100 CAMELOT DRIVE
FOND DU LAC, WI 54935
PHONE: (920) 926-9800
WWW.EXCELENGINEER.COM

PROJECT INFORMATION
PROJECT NUMBER 1823380

TENANT BUILD-OUT FOR:
ASPEN DENTAL
4011 WARDS ROAD • LYNCHBURG, VA 24502

PROFESSIONAL SEAL

SHEET DATES
ISSUE DATE MAY 31, 2018
REVISIONS

SHEET INFORMATION
FLOOR PLAN - LOW VOLTAGE
SHEET NUMBER
E1.1LV

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